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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/617,172

07/11/2003

Kwang-Kyu Kim

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10/20/2006

STAAS & HALSEY LLP

SUITE 700

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EXAMINER

CHEN, TIANJIE

ART UNIT

PAPER NUMBER

2627

DATE MAILED: 10/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/617,172	Applicant(s) KIM ET AL.	
	Examiner Tianjie Chen	Art Unit 2627	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,4-7,9,10,14-17 and 20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,4-7,9,10,14-17 and 20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Non-Final Rejection (RCE)

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 08/24/2006 has been entered. Claims 1, 4-7, 9, 10, 14-17, and 20 are pending.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 4, 5, 7, 9, 10, 14, 15, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Masayuki (JP 10-162464A).

Claim 1, Masayuki shows a disk clamp in Figs. 2-6 of a hard disk drive to affix a magnetic disk that stores data to a spindle motor of the hard disk drive (Fig. 1), the disk clamp including: a pressing portion formed along an outer circumference of the disk clamp at an edge portion, to press an upper surface of the disk in a vertical direction; a stress distribution portion formed inside the pressing portion and having a profile with a curved shape bulged upward to distribute stress applied to the disk; and a plurality of screw coupling holes into which screws 52 are inserted to be coupled to an upper end portion of the spindle motor and provided at a predetermined distance in

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a circumferential direction inside the stress distribution portion, wherein the press portion has a profile having a curved shape bulged downward, and a radius of the curved shape of the stress distribution portion is greater than or equal to a radius of the curved shape of the press portion (Figs. 2 and 4).

Claim 4, Masayuki further shows in Fig. 5 that the pressing portion is continuously formed at the stress distribution portion.

Claim 5, Masayuki further shows in Fig. 6 that the disk clamp has a same thickness throughout an entire portion of the disk clamp.

Claim 7, Masayuki further shows that the disk clamp is made of stainless steel (Column 5, lines 58-61), which is a metal material having a predetermined elasticity.

A "product by process" claim is directed to the product per se, no matter how actually made, see *In re Hirao*, 190 USPQ 15 at 17 (footnote 3 CCPC, 5/27/76); *In re Brown*, 173 USPQ 685 (CCPA 5/18/72); *In re Luck*, 177 USPQ 523 (CCPA, 4/26/73); *In re Fessmann*, 180 USPQ 324 (CCPA, 1/10/74); *In re Thorpe*, 227 USPQ 964 (CAFC, 11/21/85). The patentability of the final product in a "product by process" claim must be determined by the product itself and not the actual process and an old or obvious product produced by a new method is not patentable as a product, whether claimed in "product by process" claims or not. Applicant's claim 7 is a product claim, the limitation "manufactured by press processing" is a process related limitation, which gains no weight in determining patentability.

Claim 9, as described above, Masayuki further shows a disk clamp of a hard disk drive as described above, the disk clamp including: a substantially wave-shaped edge portion to press an upper surface of a disk in a vertical direction and distribute stress applied to the disk; and an inner portion having a plurality of apertures

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circumferentially arranged at predetermined distances inside the substantially wave-shaped edge portion, wherein an outer portion of the substantially wave-shaped edge portion is a pressing portion with a profile having a substantially curved shape with at least one bulge downward, an inner portion of the substantially wave-shaped edge portion is a stress distribution portion with a profile having a substantially curved shape with at least one bulge upward, and a radius of the substantially curved shape of the stress distribution portion is greater than or equal to a radius of the substantially curved shape of the pressing portion.

Claim 10, as described above, Masayuki further shows that the inner portion of the disk clamp is coupled by screws via the apertures to an upper end portion of a spindle motor of the hard disk drive.

Claim 14, as described above, Masayuki further shows that the pressing portion is continuously formed at the stress distribution portion.

Claim 15, as described above, Masayuki further shows that the disk clamp has a same thickness throughout an entire portion of the disk clamp.

Claim 17, as described above, Masayuki further shows that the disk clamp is made a metal material having a predetermined elasticity, and the limitation "manufacture by press processing" gains no weight in determining patentability.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having

ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 6 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Masayuki in view of Crosshatch et al (US 5,528,434).

Claims 6 and 16, Masayuki does not show the situation as the clamp is released from the spindle. Bronshvatch et al shows a clamp as it is released from the spindle in Fig. 6, which has a dome shape with a center portion bulged upward as a whole and, when the disk clamp is coupled to the spindle motor by the screws, the disk clamp is flattened as a whole (Fig. 7b, column 5, lines 44-49 and column 6, line 60-66). It is obvious at the time to one of ordinary skill in the art to expect that Masayuki's clamp also has such a dome shape bulge. The rationale is as follows: Bronshvatch et al teaches that the dome is necessary for clamping the disk and distributing the stress (Column 5, lines 44-49; and column 6 line 60 to column 7, line 4). One of ordinary skill in the art would have been motivated to expect the same structure in Masayuki's clamp for clamping the disc and distributing stress.

4. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Masayuki in view of Bryan et al (US 5,801,901).

As described above, Masayuki shows a disk clamp of a hard disk drive to affix a magnetic disk to a spindle motor of the hard disk drive, including: a pressing portion formed along an outer circumference of the disk clamp at an edge portion, to press an upper surface of the disk in a vertical direction; a stress distribution portion formed inside the pressing portion and having a profile with a curved shape bulged upward to distribute stress applied to the disk; and a plurality of screw coupling holes into which screws are inserted to be coupled to an upper end portion of the spindle motor and

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provided at a predetermined distance in a circumferential direction inside the stress distribution portion, wherein the pressing portion has a curved profile, but does not show a flat profile.

Bryan et al shows a clamp, which has two embodiments; one in Fig. 3 has curved profile and another one in Fig. 6 has flat profile.

It would have been obvious at the time the invention was made to one of ordinary skill in the art to include the flat profile as an alternative. The rationale is as follows: Applicant has not attached any importance for switching from curved profile to flat profile and even not attach a drawing for the flat profile. The difference between the curved profile and flat profile is only a shape change. Bryan et al teaches the flat profile and curved profile are alternatives in embodiments. One of ordinary skill would have been motivated to include flat profile as an alternative.

Response to Arguments

5. Applicant's arguments filed 07/31/2006 have been fully considered but they are not persuasive.

Applicant argues that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., the features recited above) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tania Chen whose telephone number is 571-272-7570.

The examiner can normally be reached on 8:00-4:30, Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa Nguyen can be reached on 571-272-7579. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


TIANJIE CHEN
PRIMARY EXAMINER